Ammonia emissions from outdoor fattening pigs on concrete pad – a farm case study

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Objective: Evaluate the effect of frequency of scraping the pigs’ toilet area, on ammonia (NH₃) emissions

- 68 fattening pigs per group, 24 weeks old
- Experimental set up
  - not scraped vs. daily scraped concrete sub-areas (N= 2 pig groups per treatment)
  - Measurements of NH₃ emissions were conducted after scraping and definition of toilet, wet and dry sub-areas within the outdoor concrete run
The four pig groups at start
wet, toilet, dry sub-areas
toilet before/after scraping
Average ammonia (NH₃) emission losses for each measuring period per day for toilet and wet sub-areas without scraping (Groups 1, 2) with scraping (Groups 3, 4)
Conclusions

• **Ammonia emissions** were each day **highest from the toilet sub-area**
• **Scraping the toilet sub-area daily kept NH₃ emissions on a similarly low level** over the three experimental days
• **Scraping wet sub-areas** on the concrete run tended to decrease NH₃ emissions but the measure **had a less clear effect**.
• **The dry sub-area** on the concrete run **had low to hardly detectable NH₃ emissions** for all three experimental days
• Daily removal of urine and faeces prerequisite a design promoting pigs to choose a toilet sub-area, and development of usable equipment and work routines.